

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 27 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. *If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|  |   |             |   |                               |  |                   |
|--|---|-------------|---|-------------------------------|--|-------------------|
| Substitute for form 1449/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br><i>(Use as many sheets as necessary)</i> |   |             |   | <b>Complete if Known</b>      |  |                   |
|  |   |             |   | <b>Application Number</b>     |  | 10/582,288        |
|  |   |             |   | <b>Filing Date</b>            |  | December 14, 2006 |
|  |   |             |   | <b>First Named Inventor</b>   |  | James C. Jamieson |
|  |   |             |   | <b>Art Unit</b>               |  | 1651              |
| <b>Examiner Name</b>   |   | Taeyoon Kim |   |                               |  |                   |
| <b>Sheets</b>  | 2 | of          | 4 | <b>Attorney Docket Number</b> |  | R131 1010.1       |

## NON PATENT LITERATURE DOCUMENTS

| Examiner Initials* | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or county where published.                          | T <sup>2</sup> |
|--------------------|-----------------------|---|----------------|
|                    | D1                    | Alexander et al., 1976, "Subcellular localization of B apoprotein of plasma lipoproteins in rat liver," J. Cell Biol. 69: 241-263   |                |
|                    | D2                    | Antonny et al., 1997, "Activation of ADP-ribosylation factor 1 GTPase-activating protein by phosphatidylcholine-derived diacylglycerols," J. Biol. Chem., 272, 30848-30351  |                |
|                    | D3                    | Asp et al., 2000, "ADP-ribosylation factor 1 and its activation of phospholipase D are important for the assembly of very low density lipoproteins," J. Biol Chem: 275, 26285-26292   |                |
|                    | D4                    | Balsinde, 2002, "Roles of various phospholipases A2 in providing lysophospholipid acceptors for fatty acid phospholipid incorporation and remodeling," Biochem J. 364: 695-702  |                |
|                    | D5                    | Biederbick et al., 1995, "Monodansylcadaverine (MDC) is a specific in vivo marker for autophagic vacuoles," Eur.J.Cell Bio. 66: 3-14  |                |
|                    | D6                    | Blanchette-Mackie et al., 1995, "Perilipin is located on the surface layer of intracellular lipid droplets in adipocytes," J.Lipid Res., 36: 1211-1226  |                |
|                    | D7                    | Burnett et al., 2003, "A novel nontruncating APOB gene mutation, R463W, causes familial hypobetalipoproteinemia," J.Biol Chem. 278: 13442-13452   |                |
|                    | D8                    | Chernomordik, L., M. M. Kozlov, and J. Zimmerberg, 1995, "Lipids in biological membrane fusion," J.Membr. Biol. 146:1-14  |                |
|                    | D9                    | Cui et al, 1995, "Expression of phosphatidylethanolamine N-methyltransferase-2 in McArdle-RH7777 hepatoma cells inhibits the CDP-choline pathway for phosphatidylcholine biosynthesis via decreased gene expression of CTP:phosphocholine cytidyltransferase," Biochem J., 312: 939-945 |                |
|                    | D10                   | Daleke 2003, "Regulation of transbilayer plasma membrane phospholipid asymmetry," J.Lipid Res, 44: 233-242  |                |
|                    | D11                   | Dashti et al., 2002, "The N-terminal 1000 residues of apolipoprotein B associate with microsomal triglyceride transfer protein to create a lipid transfer pocket required for lipoprotein assembly," Biochemistry, 41: 6978-6987  |                |
|                    | D12                   | DeLong et al., 1999, "Molecular distinction of phosphatidylcholine synthesis between the CDP-choline pathway and phosphatidylethanolamine methylation pathway," J.Biol. Chem. 274: 29683-29688  |                |
|                    | D13                   | Fisher et al., 2001, "The triple threat to nascent apolipoprotein B. Evidence for multiple, distinct degradative pathways," J.Biol. Chem. 276: 27855-27863  |                |
|                    | D14                   | Fisher et al., 1998, "Apolipoprotein B metabolism in hypertriglyceridemic diabetic patients administered either a fish oil- or a vegetable oil-enriched diet," J. Lipid Res. 39: 388-401  |                |
|                    | D15                   | Fisher and Ginsberg, 2002, "Complexity in the secretory pathway: the assembly and secretion of apolipoprotein B-containing lipoproteins," J. Biol. Chem. 277: 17377-17380   |                |
|                    | D16                   | Gusarova et al., 2003, "Apolipoprotein B100 exit from the endoplasmic reticulum (ER) is COPII-dependent, and its lipidation to very low density lipoprotein occurs post-ER," J.Biol. Chem. 278: 48051-48058   |                |
|                    | D17                   | Harris, 1999, "n-3 fatty acids and human lipoprotein metabolism: an update," Lipids Suppl 34: S257-S258   |                |
|                    | D18                   | Hebbachi and Gibbons, 2001, "Microsomal membrane-associated apoB is the direct precursor of secreted VLDL in primary cultures of rat hepatocytes," J.Lipid Res. 42: 1609-1617   |                |

|  |   |    |   |                               |  |                   |
|--|---|----|---|-------------------------------|--|-------------------|
| Substitute for form 1449/PTO<br><br><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b><br><br><i>(Use as many sheets as necessary)</i> |   |    |   | <b>Complete if Known</b>      |  |                   |
|  |   |    |   | <b>Application Number</b>     |  | 10/582,288        |
|  |   |    |   | <b>Filing Date</b>            |  | December 14, 2006 |
|  |   |    |   | <b>First Named Inventor</b>   |  | James C. Jamieson |
|  |   |    |   | <b>Art Unit</b>               |  | 1651              |
|  |   |    |   | <b>Examiner Name</b>          |  | Taeyoon Kim       |
| Sheet  | 3 | of | 4 | <b>Attorney Docket Number</b> |  | R131 1010.1       |

| NON PATENT LITERATURE DOCUMENTS |                       |  |                |
|---------------------------------|-----------------------|--|----------------|
| Examiner Initials*              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or county where published. | T <sup>2</sup> |
|                                 | D19                   | Hsu et al., 2000, "Effect of n-3 fatty acids on the composition and binding properties of lipoproteins in hypertriglyceridemic patients," Am.J. Clin. Nutr. 71: 28-35  |                |
|                                 | D20                   | Ichimura et al., 2000, "A ubiquitin-like system mediates protein lipidation," Nature 408: 488-492  |                |
|                                 | D21                   | Kabeya et al., 2000, "LC3, a mammalian homologue of yeast Apg8p, is localized in autophagosome membranes after processing," EMBO J. 19 (21): 5720-5728   |                |
|                                 | D22                   | Klionsky and Emr, 2000, "Cell biology – Autophagy as a regulated pathway of cellular degradation," Science 290: 1717-1721  |                |
|                                 | D23                   | Kotkat et al., 1999, "Effect of dietary fish oil (active EPA-30) on liver phospholipids in young and aged rats," Comp Biochem. Physiol A Mol. Integr. Physiol 122: 283-289   |                |
|                                 | D24                   | Lang and Davis, 1990, "Fish oil fatty acids impair VLDL assembly and/or secretion by cultured rat hepatocytes," J. Lipid Res, 31: 2079-2086  |                |
|                                 | D25                   | McLeod et al. 1996, "Apolipoprotein B sequence requirements for hepatic very low density lipoprotein assembly. Evidence that hydrophobic sequences within apolipoprotein B48 mediate lipid recruitment," J. Biol. Chem 271: 18445-18455                        |                |
|                                 | D26                   | McLeod et al., 1994, "Carboxyl-terminal truncation impairs lipid recruitment by apolipoprotein B100 but does not affect secretion of the truncated apolipoprotein B-containing lipoproteins," J. Biol. Chem. 269: 2852-2862                                    |                |
|                                 | D27                   | Morrisett et al., 2002, "Effects of Sirolimus on Plasma Lipids, Lipoproteins, and Fatty Acid Metabolism in Renal Transplant Patients," J. Lipid Res 43: 1170-1180  |                |
|                                 | D28                   | Mizushima et al., 2003, "Role of the Apg12 conjugation system in mammalian autophagy," Int. J. Biochem. And Cell Biology 35: 553-561   |                |
|                                 | D29                   | Mizushima et al., 2001, "Dissection of autophagosome formation using Apg5-deficient mouse embryonic stem cells," J. Cell Biol., 152(4): 657-668  |                |
|                                 | D30                   | Murphy and Vance, 1999, "Mechanisms of lipid-body formation," Trends Biochem. Sci. 24: 109-115   |                |
|                                 | D31                   | Nestel et al., 1984, "Suppression by diets rich in fish oil of very low density lipoprotein production in man," J. Clin. Invest. 74: 82-89   |                |
|                                 | D32                   | Nishimaki-Mogami et al., 2002, "Inhibition of phosphatidylcholine synthesis via the phosphatidylethanolamine methylation pathway impairs incorporation of bulk lipids into VLDL in cultured rat hepatocytes," J. Lipid Res. 43: 1035-1045                      |                |
|                                 | D33                   | Noga et al., 2002, "An unexpected requirement for phosphatidylethanolamine N-methyltransferase in the secretion of very low density lipoproteins," J. Biol. Chem., 277: 42358-42365  |                |
|                                 | D34                   | Packard and Shepherd, 1997, "Lipoprotein heterogeneity and apolipoprotein B metabolism," Arterioscler. Thromb. Vasc. Biol. 17: 3542-3556   |                |
|                                 | D35                   | Parks et al., 1989, "Fish oil decreases hepatic cholesteryl ester secretion but not apoB secretion in African green monkeys," J. Lipid Res. 30: 1535-1544  |                |
|                                 | D36                   | Parks et al., 1990, "Effect of fish oil diet on hepatic lipid metabolism in nonhuman primates: lowering of secretion of hepatic triglyceride but not apoB," J. Lipid Res. 31: 455-466  |                |
|                                 | D37                   | Phung et al., 1997, "Phosphoinositide 3-kinase activity is necessary for insulin-dependent inhibition of apolipoprotein B secretion by rat hepatocytes and localizes to the endoplasmic reticulum," J.Biol. Chem. 272: 30693-30702                             |                |
|                                 | D38                   | Reggiori and Klionsky 2002, "Autophagy in the eukaryotic cell," Eukaryot. Cell 1(1): 11-21   |                |
|                                 | D39                   | Rustaeus et al., 1999, "Assembly of very low density lipoprotein: a two-step process of apolipoprotein B core lipidation," J. Nutr. 129: 463S-466S   |                |

|  |   |    |                             |                               |                   |             |
|--|---|----|-----------------------------|-------------------------------|-------------------|-------------|
| Substitute for form 1449/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br><i>(Use as many sheets as necessary)</i> |   |    | <b>Complete if Known</b>    |                               |                   |             |
|  |   |    | <b>Application Number</b>   |                               | 10/582,288        |             |
|  |   |    | <b>Filing Date</b>          |                               | December 14, 2006 |             |
|  |   |    | <b>First Named Inventor</b> |                               | James C. Jamieson |             |
|  |   |    | <b>Art Unit</b>             |                               | 1651              |             |
|  |   |    | <b>Examiner Name</b>        |                               | Taeyoon Kim       |             |
| Sheet  | 4 | of | 4                           | <b>Attorney Docket Number</b> |                   | R131 1010.1 |

| NON PATENT LITERATURE DOCUMENTS |                       |   |                 |  |
|---------------------------------|-----------------------|---|-----------------|--|
| Examiner Initials*              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or county where published.      | T <sup>2</sup>  |  |
|                                 | D40                   | Rustaeus et al., 1998, "The microsomal triglyceride transfer protein catalyzes the post-translational assembly of apolipoprotein B-100 very low density lipoprotein in McA-RH7777 cells," J. Biol. Chem. 273: 5196-5203   |                 |  |
|                                 | D41                   | Shelness and Sellers, 2001, "Very-low density lipoprotein assembly and secretion," Curr. Opin. Lipidol. 12(2): 151-157  |                 |  |
|                                 | D42                   | Stillemark et al., 2000, "The assembly and secretion of apolipoprotein B-48-containing very low density lipoproteins in McA-RH7777 cells," J.Biol.Chem. 275: 10506-10513  |                 |  |
|                                 | D43                   | Stromhaug et al., 1998, "Purification and characterization of autophagosomes from rat hepatocytes," Biochem. J. 335: 217-224  |                 |  |
|                                 | D44                   | Sullivan et al., 1986, "Paradoxical elevation of idl apoprotein - b levels in hypertriglyceridemic patients and normal subjects ingesting fish oil atherosclerosis," Atherosclerosis, 61: 129-134   |                 |  |
|                                 | D45                   | Tran et al., 1998, "Functional analysis of disulfide linkages clustered within the amino terminus of human apolipoprotein B.," J. Biol. Chem. 273: 7244-7251  |                 |  |
|                                 | D46                   | Tran et al., 2000, "The assembly of very low density lipoproteins in rat hepatoma McA-RH7777 cells is inhibited by phospholipase A2 antagonists," J.Biol.Chem. 275: 25023-25030   |                 |  |
|                                 | D47                   | Tran et al., 2002, "Intracellular assembly of very low density lipoproteins containing apolipoprotein B100 in rat hepatoma McA-RH7777 cells," J.Biol.Chem. 277: 31187-31200   |                 |  |
|                                 | D48                   | Ueno et al., 1991, "Membrane markers of endoplasmic reticulum preserved in autophagic vacuolar membranes isolated from leupeptin-administered rat liver," J.Biol.Chem. 266: 18995-18999   |                 |  |
|                                 | D49                   | Verkade et al., 1993, "Impaired biosynthesis of phosphatidylcholine causes a decrease in the number of very low density lipoprotein particles in the Golgi but not in the endoplasmic reticulum of rat liver," J.Biol.Chem. 268(33): 24990-24996                    |                 |  |
|                                 | D50                   | Vukmirica et al., 2002, "The N-linked oligosaccharides at the amino terminus of human apoB are important for the assembly and secretion of VLDL," J. Lipid Res. 43: 1496-1507   |                 |  |
|                                 | D51                   | Wang et al., 1995, "Degradation of apolipoprotein B in cultured rat hepatocytes occurs in a posat-endoplasmic reticulum compartment," J.Biol.Chem 270: 24924-24931  |                 |  |
|                                 | D52                   | Wang et al, 1999, "The activity of microsomal triglyceride transfer protein is essential for accumulation of triglyceride within microsomes in McA-RH7777 cells. A unified model for the assembly of very low density lipoproteins," J.Biol. Chem. 274: 27793-27800 |                 |  |
|                                 | D53                   | Wong and Nestel, 1987, "Eicosapentaenoic acid inhibits the secretion of triacylglycerol and of apoprotein B and the binding of LDL in Hep G2 cells," Atherosclerosis 64: 139-146  |                 |  |
|                                 | D54                   | Yao et al., 1997, "Intracellular degradation of newly synthesized apolipoprotein B," J. Lipid Res. 38: 1937-1953  |                 |  |
|                                 | D55                   | Yao and Vance, 1988, "The active synthesis of phosphatidylcholine is required for very low density lipoprotein secretion from rat hepatocytes," J.Biol. Chem. 263: 2998-3004  |                 |  |
|                                 | D56                   | Yamamoto et al., 1990, "Characterization of the isolation membranes and the limiting membranes of autophagosomes in rat hepatocytes by lectin cytochemistry," J. Histochem. Cytochem, 38: 573-580   |                 |  |
|                                 | D56                   | Zhang et al., 2002, "Creating new, fluorescent probes for cell biology," Nat. Rev.Mol. Cell. Biol. 3: 906-918   |                 |  |
| Examiner Signature              |                       |   | Date Considered |  |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 27 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief